

**SYSTEMS, METHODS AND APPARATUS FOR ORGANIZING
GROUPS OF SELF-CONFIGURABLE MOBILE ROBOTIC AGENTS IN
A MULTI-ROBOTIC SYSTEM**

ABSTRACT OF THE DISCLOSURE

A system of self-organizing mobile robotic agents (MRAs) in a multi-robotic system (MRS) is disclosed. MRAs cooperate, learn and interact with the environment. The system uses various AI technologies including genetic algorithms, genetic programming and evolving artificial neural networks to develop emergent dynamic behaviors. The collective behaviors of autonomous intelligent robotic agents are applied to numerous applications. The system uses hybrid control architectures. The system also develops dynamic coalitions of groups of autonomous MRAs for formation and reformation in order to perform complex tasks.

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